The Antique Radio Gazette

OFFICIAL PUBLICATION OF THE ANTIQUE RADIO CLUB OF AMERICA

VOL. 13 SUMMER 1985 No. 2

SEE PAGE TWO

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It is our intention to have the Gazette published as closely as possible to the following dates:

March 31 — June 30
September 30 — December 30

The closing dates for receiving material of all kinds in order to have it appear in the next issue would be:

February 15 — May 15
August 15 — November 15

The Antique Radio Gazette is published quarterly in Madison, Connecticut.

Yearly dues of $10.00 U.S. currency are payable to ARCA January 1, of each year for members in the USA, Canada, and Mexico. Overseas dues are $12, which includes airmail postage.

The Antique Radio Club of America was incorporated in the State of Kentucky, in September, 1972. The first meeting was held at the Marriott Motor Inn, Washington, D.C., on September 23, 1972. At this meeting, by-laws were read and approved and directors selected. We feel that the inception of this Club is a giant step in bringing together those individuals whose chief interest lies in the area of early radio. We invite all collectors and historians of the subject to join the Club. A note to William E. Denk, Secretary, 81 Steeplechase Road, Devon, Pennsylvania 19333, will bring you an application blank by return mail.

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Message from the President

This message has to be written before the Annual ARCA Convention at Grand Island, New York, but will be published after the big event. So, I can't report on details about the convention this time. The Niagara Frontier Wireless Association has been working very hard to make the ARCA convention a success. So, even though we haven't been there yet, I've been in on enough of the planning to know that it will be a big event for all of the ARCA members who attend.

The plan to hold the Spring 1986 ARCA Convention at Dearborn, Michigan has had to be cancelled. We are looking for a new location in the mid west that hopefully can be announced in the next issue of the *Gazette.* The policy of ARCA is to rotate the convention site each year, even years in the mid west and odd years in the east; and not to return to the same location more often than once every five years. For a convention to be held, there must be a nucleous of local ARCA members, or a local club, that is willing to host the convention, and to handle local arrangements. The ARCA Board of Directors will help the local group, and will manage many of the functions during the convention. So, if you or your group would like to discuss the feasability of your hosting a future ARCA convention in your city, please drop me a line so we can discuss it.

ARCA membership continues to grow at about 17% a year, thanks to the members who encourage others to join. Thanks to those of you who are helping us grow! Every new member increases the ability of ARCA to better serve the members.

There was an interesting "first" recently. AWA, ARCA, and the new Long Island Club jointly sponsored the dedication of Ralph Williams' "Voice of the Twenties" museum at Orient, New York. There was a large turnout for the two-day affair, which included a large flea market, an equipment contest, as well as an open house at the museum. Ralph has a fine museum in his large, and very old home (part dates back to the mid 1600's!). He has a very extensive collection of Atwater Kent sets, as well as a large general collection. His museum can be visited by appointment. I recommend it if you are in the area. I hope that AWA and ARCA can continue to combine forces from time to time to further the advancement of our antique radio hobby.

In the fall issue of the *Gazette,* I will give you a report on the annual meeting at Grand Island, and a report of the Board of Directors meeting.

Jim

Note from the Editor

We are very pleased to announce that Kenneth L. McIntosh is our new Television Editor. Ken is an expert in this field, having spent many years collecting, researching, and repairing the pre-war television sets. Members will remember the very interesting lecture he gave at the Lake Placid Conference. Ken also publishes his own bulletin, which is called "Antique Television Topics."

If you have problems about your early television sets, write to him at 907 Radcliffe Road, Baltimore, Maryland 21204. His telephone number is 301/828-9194.

COVER

Jack Warren, whose cartoons have appeared in many major publications, was nice enough to furnish us with our cover art. He lives in Fairfield, Conn. and collects cathedral radios.

Jack Warren
393 Meadowbrook Rd.
Fairfield, CT 06430

DID A FRENCHMAN INVENT WIRELESS TELEGRAPHY IN 1850? An Unbelievable Story by John Milton Williams

I am fortunate to have purchased two bound volumes of early Scientific American magazines from a rare-book dealer. Together they span the years 1850 through 1852. Their pages are filled with fascinating accounts of scientific happenings of those early years and are a permanent record of man's fertile genius and inventive folly. These journals herald the newest inventions and patents of the day and, as you might expect, they range from the ridiculous to the sublime. Surely none of its editors or writers ever dreamed they were witnessing the birth pangs of the industrial revolution that would explode in a few short years and change the world forever. Here is but one of the many tales therein:

From *Scientific American,* vol. 6, no. 11, November 30, 1850.

The Snail Telegraph

The Paris correspondent of the Literary Gazette writes: —"I have an astounding announcement to make to you. The marvels of the electric telegraph are annihilated and the means of instantaneous communication between man and man, at any distance whatsoever, to the extremities of the earth, has been discovered! Yes, the last and most majestic of human discoveries has fallen from its height almost at the very moment at which it dawned on the world, and it is replaced by one a thousandfold more glorious, and which, if it only partially realise the commencement, will totally change the face of the world! And the means by which this wonderful thing is done are even more wonderful than the thing itself; snails, aye, snails, galvanic and magnetic influence! Do not think that I am hoaxing you, it is on the authority of the *Presse* that I speak, one of the most important newspaper organs of Europe, in talent, character and circulation; and it is not to be believed that such a journal would be a party to an impudent and stupid attempt to bamboozle the public. In its numbers of Friday the 25th and Saturday the 26th ultimo, there are two feuilletons (essays) signed by M. Jules Allix, number 92 Rue Richelieu, roundly, formally positively asserting that the secret of effecting instantaneous communication, without regard to distance, and consequently without continuous lines, as in the electric telegraph, has been brought to light; nay, more, that on the third of this present month a question asked at the said address, received an almost immediate reply from the depths of America! and that this was done chiefly by the instrumentality of snails! The inventors or discoverers of the alleged marvel are a M. Benoit, of the department of the Herault, and a M. Biat, of America. After many years of observation and experimentation,they, it is asserted, have ascertained that certain descriptions of snails possess peculiar properties or sympathies, which cause them to feel, no matter at what distance they may be, the sensation, or commotion, when acted on in a particular way by galvanic and magnetic influences.

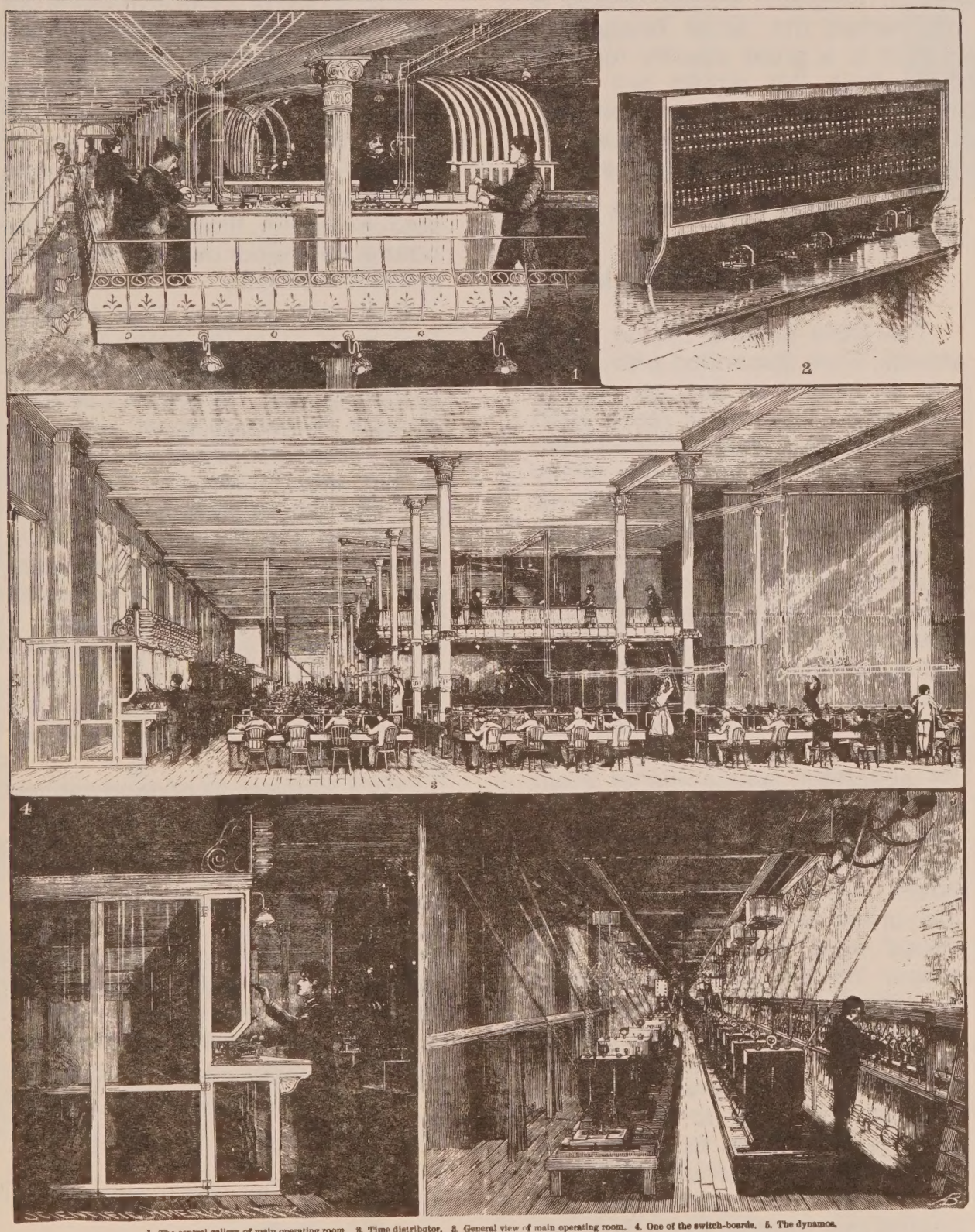
Placed in boxes in such a way that, on being touched, they agitate particular letters, the operator has only to make snail A give a kick (sic) and snail A in a corresponding box, which box may be in the backwoods of America or the deserts of Africa, repeats the kick and so on for every letter of a required word. The snails must of course previously be put in sympathetic communication, and the boxes, with all their apparatus, which is rather complicated, must be alike. The shock which the snail in box 2 feels is said to be caused by

SCIENTIFIC AMERICAN

[Entered at the Post Office of New York, N. Y., as Second Class matter. Copyrighted, 1892, by Munn & Co.

A WEEKLY JOURNAL OF PRACTICAL INFORMATION, ART, SCIENCE, MECHANICS, CHEMISTRY, AND MANUFACTURES.

Vol. LXVI.—No. 13. ESTABLISHED 1845 | NEW YORK. MARCH 26, 1892. | $3.00 A YEAR. WEEKLY.



1. The central gallery of main operating room. 2. Time distributor. 3. General view of main operating room. 4. One of the switch-boards. 5. The dynamos.

THE WESTERN UNION CENTRAL TELEGRAPH OFFICE AND PLANT IN NEW YORK CITY.—[See page 198.]

Editors Note: The above *Scientific American* is a later date than referred to in Mr. Williams' article.

an electric or magnetic fluid, carried by the earth with extraordinary rapidity, and in a manner unknown to man; in other words it is the electric telegraph without the connecting wire. All this seems to be absurd, does it not? but I am describing the thing as it is said to be."

(This telegraph, we apprehend, is well-named the "Snail Telegraph." France is a great country for new discoveries. We would not have noticed the above, only we have seen it copied into a number of papers. It is a piece of French nonsense.)

From *Scientific American,* vol. 6, no. 50, August 30, 1851

The Snail Telegraph Again

The Paris papers, by the latest arrivals, were discanting with a mixture of nonsense and sense, not uncommon to some of them, such as the *Presse,* about the "Snail Telegraph." Here is a description of this telegraph: "In a sort of barn are two structures of wood placed on open stands. In the front of each was a large wooden wheel moving on its center. This wheel, about two yards in diameter, presented the most singular appearance; 300 or 400 snails were kept immovable by means of a sort of paste in a reservoir in zinc; the open part of the shells was toward the spectator, and some of them protruded their heads. On the wheels were lines of metal, on one of which were the snails, and on the other letters of the alphabet. The reservoirs of zinc in which the snails were placed were lined with cloth and copper, like the voltaic pile, and all the reservoirs were connected by conducting wires which were collected on the axis of the wheel. One apparatus was to serve to send a dispatch, the other to receive it—such as from Paris to London. In turning the wheel the letter required was brought to an opening and designated by a needle. Each time that Paris sent up a letter to the opening and designated it by the needle, M. Benoit, in the structure called London wrote it with a pencil on paper, after having discovered it on his own wheel, by, as he said, moving a snail in its reservoir on the letters, which snail made a movement on passing by the letter indicated."

(This is one of those inventions got up to deceive some ignorant but rich speculating honest gentleman: It has been visited by Emile de Girardin, Victor Hugo and other public notables, but (they are) ignorant of science. It is some electromagnetic deception. There is more than one such invention, though not of a like nature, before our own people at this present moment.)

The reader should bear in mind that, most likely, the preceding was never intended to be taken seriously by its originator. I'm certain it all started as a humorous spoof with, perhaps a little patriotic jealousy sprinkled in. You see, Samuel F.B. Morse had just had his telegraph system accepted by the French government and the slower French systems were declared inferior. Not only the French, but many other nationalities, were a little perturbed over the fact that the young upstart of a country, America, had captured the imagination of the world with its remarkable invention, the telegraph!

Only a harmless bit of good-natured French whimsy. Yet, to my knowledge, it is possibly the first mention of "telegraph without connecting wires" in any publication. It could be that this farcical description of wireless telegraphy "clicked" in the minds of other inventors of that day and later led to the discoveries that gave us radio. It is for these reasons I felt the story worth passing on to you. I hope it is of interest and that it brings a smile to your face.

The Antique Radio Club of America Inc.

The Charleston West Virginia Area Chapter
Region 3
4204 Thorn Apple Lane
Charleston, West Virginia 25312

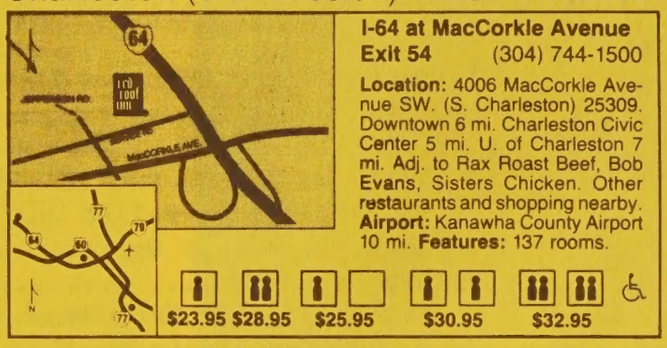
AUGUST 3 1985

First Annual Econo-Radio Meet
Mid-Eastern Event

The West Virginia Chapter will host the first-ever meet aimed at cutting your cost of attendance and at the same time making it one of the most interesting you could attend.

Accommodations will be at the Red Roof Inn, Jefferson Road Exit I-64, Charleston, WV. This will be a rain or shine event with shelter under the interstate next door to the Red Roof Inn. Rates are low, accommodations first class, restaurants within walking distance. Registration is FREE if pre-registered; but will be $5.00 the day of the meet otherwise.

Charleston (S Charleston) **WEST VIRGINIA**


64
I-64 at MacCorkle Avenue
Exit 54 (304) 744-1500
Location: 4006 MacCorkle Avenue SW. (S. Charleston) 25309. Downtown 6 mi. Charleston Civic Center 5 mi. U. of Charleston 7 mi. Adj. to Rax Roast Beef, Bob Evans, Sisters Chicken. Other restaurants and shopping nearby. Airport: Kanawha County Airport 10 mi. Features: 137 rooms.
$23.95 $28.95 $25.95 $30.95 $32.95

Events are as follows:

1. Swap Meet from 7:00 a.m. till 7:00 p.m.
2. Radio Contest from 2:00 p.m. to 4:00 p.m. - Check in from 12:00 a.m. to 1:30 p.m.
3. Antique Car display.
4. Radio Amateur Flea Market.
5. Door Prizes.

This is a great opportunity to attend two meets in a row and give you a break, if you wish to travel on to Elgin the next week for "Radiofest".

If you wish to display and sell, we ask only for a $5.00 donation when you arrive.

For your reservations call 1-800-848-7878.

Name _____

Address _____

City _____, State _____, Zip Code _____

Telephone No. _____

No other mailing will be made.

The Antique Radio Club of America Inc.

The Charleston West Virginia Area Chapter

ADDENDUM TO BOOKSTORE PRICE SHEET

Man Of High Fidelity, Edwin H. Armstrong.....$2.00
Early Wireless, Anthony Constable, HC, (printed in England).....$12.95
Collecting Phonographs & Gramophones, Christopher Proudfoot, HC-full color illus. (Reg. $14.95 Special).....$12.95
Modern Electrics, 36 page reprint on the 75th anniversary of Radio Electronics.....$2.50
Wireless & Electrical Encyclopedia, 178 page 1918 catalog, The Electro Importing Co.....$4.95
The Cat's Whisker, 50 Years Of Wireless Design by Jonathan Hill, 8½ x 11 full color cover, 95 pages.....$9.95
Atwater Kent Radio - A Look At The Atwater Kent Manufacturing Company, a reprint, 6 x 9 32 pages.....$4.95
Radio Collectors Pin (the size of a quarter done in high metal relief and porcelain).....$4.95
Instructions For Operating Grebe Radios, 64 pages pocket size.....$4.95
Radiola Super - Hetrodyne 2nd Harmonic.....$4.95
Atwater Kent Radio Log.....$1.00
Atwater Kent Instruction Book Vol. I, an exact color duplication of original.....$8.95
Grebe Synchrophase Instruction Manual, 70 pages, an excellent reproduction.....$10.95
Official Radio Service Manual, 1930 Hugo Gernsback publication, 8½ x 11, 356 pages - "a true value"..$19.95
The Story Of Nipper & His Master's Voice, 64 pages, full illustrations.....$6.50

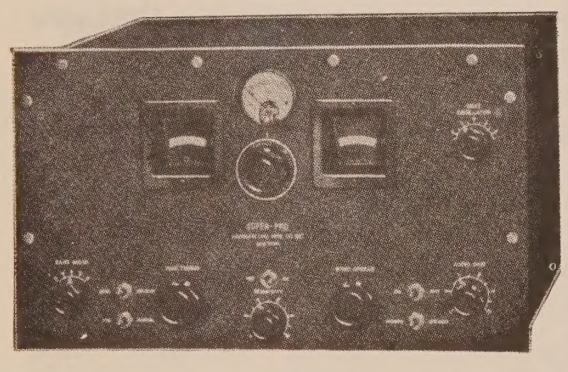
Mail Orders to: Antique Radio Club of America
W.Va. Chapter Bookstore
4204 Thornapple Lane
Charleston, WV 25312

All orders under $25.00 - enclose $1.00 postage.
All orders over $25.00 - shipped free.

A Salute to Some Unique Radios that Won a War by Evan G. Wallace (K9PJA)

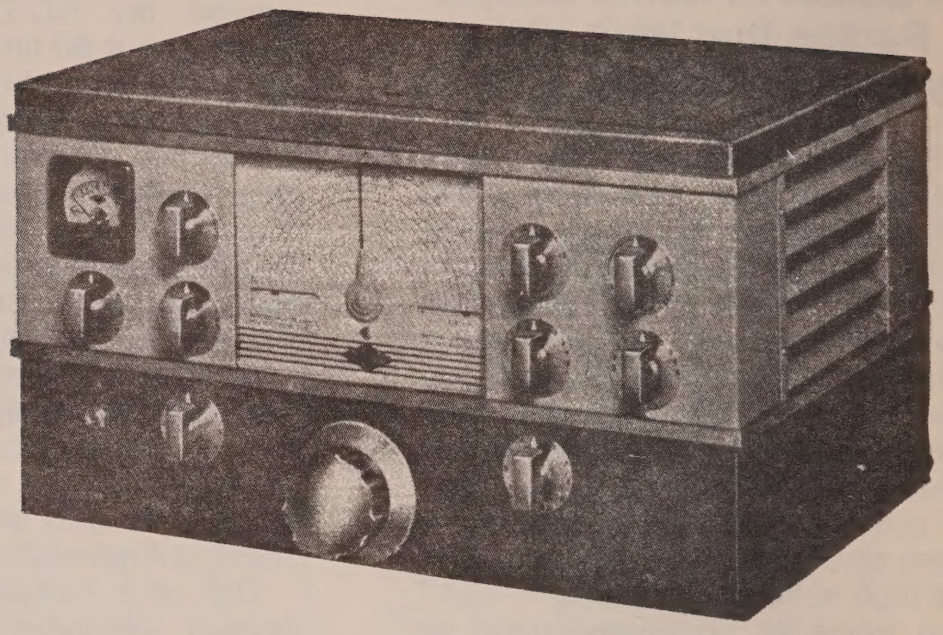
Recently I bumped into a friend attached to Navy Communications. We talked briefly about communications gear of the past and present. Both of us were in our early teens during World War II, and despite amateur restrictions, built and converted sets for shortwave listening. (From winding coils around Quaker Oats containers to "hiding the leads" of our roof antennas.) Both of us were also very fortunate in receiving for high school graduation in 1947, two gems of communications receivers that emerged from wartime engineering genius—my National NC-200 and his Hallicrafters S-22. After almost forty years, my 10-band National can spin loops around any Radio-Shack Taiwan/Japanese transistorized all-wave set available. Of course my NC-200 twelve-tuber burns about 80 times the current, is not portable, and requires a ground and antenna. Nevertheless, for DX selectivity, bandspread, and tone, this National and other wartime classics will remain elite and just possibly reappear as a vital necessity for our armed forces. A Navy friend stated that one of the Pentagon's concerns is printed circuit and module transistor breakdown, particularly in a nuclear confrontation. The truth is, any ionization or radiation ruins solid state and silicon chip equipment, but not oldtime vacuum tubes.

Out of a hundred relatively unknown electronic companies that emerged after Pearl Harbor as being awarded over 80% of Army/Navy contracts and "E" awards, Hallicrafters (Chicago based), National, and Hammarlund (East Coast companies) became famous after VE/VJ Day as



NEW SERIES 200
SUPER PRO
1.25-40MC
16 TUBES
JANUARY 1940

SX-28 SUPER SKYRIDER
.55-42MC
15 TUBES
FALL 1941



NATIONAL NC-200

having been used in every land and on every sea throughout the world.

Hallicrafter gained the most popularity and flexibility in sets designed mainly for the armed forces. First coming out with the prewar chassis amateur S-22R in grey-crinkled color immediately recognized by the "funny" metal-stamped "H" on its speakers. The S-22 5-band design was probably the first mass-production unit with so-called "bandspread."

Hallicrafters "Cadillac" and the last of many sets produced during war was the SX-28 known as the "workhorse" of every central field communications post. Its 40 pounds and 14 tubes with all combination dials and selector knobs for crystal and sideband tuning to noise-suppression must have had many a greenhorn operator scratching his helmet.

Many, however, would argue that in Coast Guard stations and battleships of that era could be found the "Rolls-Royce" of receiving gear—National's classic "HRO" and later the NC-200 movable coil receivers. Both National and Hammarlund (along with Johnson, Collins, etc.) were mostly in parts defense production, subcontracting in transmitter coils, porcelain insulators, condensers, etc. National, however, mainly concentrated on quickly introducing two unique, truly all-wave receivers. National also manufactured a variety of quality vacuum tubes. The HRO, expensive for its size and basic components, had the distinction of having the widest range of frequencies using rack-panel coils that you would push in and pull out. HRO was the only receiver offering a VLF band covering from 50 kh to 450 KHz.

Hammarlund never did gain much military receiver status. Its 18-tube "Super-pro" attempted to beat out the SX-28 in design and style and in military contracts, but somehow it still had an amateur look, with flimsy knobs and selectors.

All three companies returned to making Ham amateur gear after WW II. Hallicrafter which went briefly into small TV's and vhf/police/aviation sets, outlived both other wartime rivals by ten more years and then went bankrupt. With increasing difficulty in obtaining the various tubes for these sets still in existence, and complexity in repairs, these sets should now rank as true antiques. No others, past or present, have faithfully received more vital and urgent codes and messages—nor have tuned into more famous/infamous messages that shaped the world's history.

News from Charleston

The Club has purchased a travel trailer which we are converting into a mobile book store. We have had two week-end parties on this project and have it about ready to stock and travel to where the business is — like Grand Island, NY in June.

The Kentucky Highlands Historical Museum Society in Ashland, KY has made an offer to member Clyde Trivette and President, Lloyd McIntyre, for ARCA to have a display in their museum. The mansion housing the museum is called Mayo Manor and was built in 1917-1920. I believe President McIntyre will have more details about this project elsewhere in this issue of the Gazette. He will also discuss the planned Econo-Radio meet to be held at the Red Roof Inn, Jefferson Road, Exit I-64, South Charleston, West Virginia, on August 3.

We have acquired a new location for meeting, storing materials, and working on radios for future museum display. We have about 2500 square feet of well-secured space on Central Avenue in Charleston, WV.

We have been invited to participate in a month-long program at the Kanawha County Public Library in Charleston on the history of Radio. This will take place in June. A representative of our club will be interviewed by a local TV station in conjunction with this program.

We had an interesting meeting in March at the home and business of member Dave Manning. Dave has a fine collection of old radios in his building near his home which also houses his computer business. He operates professionally as the "Computer Doctor." After looking his operation over and hearing him try to explain computers to a mostly snowed-under group, I kind of felt like the fellow in the early days of radio who thought radio was unnatural and probably a tool of the devil. It is amazing that so much information can be contained in a small electronic chip. When someone says, "we have you on our computer," you know you are no longer completely free. You are trapped with no escape. Whether we like it or not, more people know more about us than we really want them to know. Make a contribution to what you think is a worthy cause and shortly you will be solicited by similar groups from all over the country. Computers are clannish, they talk to each other, and tip each other off on "soft touches."

Our bookstore has reprints of Hugo Gernsback's "Official Radio Service Manual and Complete Directory of All Commercial Wiring Diagrams," originally published in 1930. It is an 8½ x 11 book with 356 pages and contains about all anyone needs to know about the working of early radio. It contains most of the schematics found in Riders Volume I plus a great amount of additional information. The price is $19.95.

J.A. Moore
Editor/Reporter

Museum Developments

The Antique Radio Club of America, W. Va. Chapter, has been invited to participate in a grand adventure with the Kentucky Highlands Museum Society. This Society has been endowed with one of the most desirable settings for a museum one could dream of; the Mayo Manor in Ashland, Kentucky.

One might ask why the W. Va. Chapter would be interested in a location in Kentucky. Have we forgotten Nathan Stubblefield at Murry, Kentucky in 1892? Ashland is only fifty miles from Charleston, just off I-64, and we have Chapter members there.

We will be working to open our display to to coincide with their celebration of their 1st anniversary Labor Day weekend. We are excited about

this opportunity and we hope you, too, can share in the excitement. This seems for the present time the best opportunity we have, given our financial limitations, in presenting and preserving our radio heritage.

AWA shares a museum site in East Bloomfield, New York, the Indiana Historical Radio Society shares space at the Cord-Duesenburg Museum in Auburn, Indiana. There, of course, are other fine examples and we would like to join these fine organizations with our own presentation.

More information will be provided you as we progress on this dream come true.

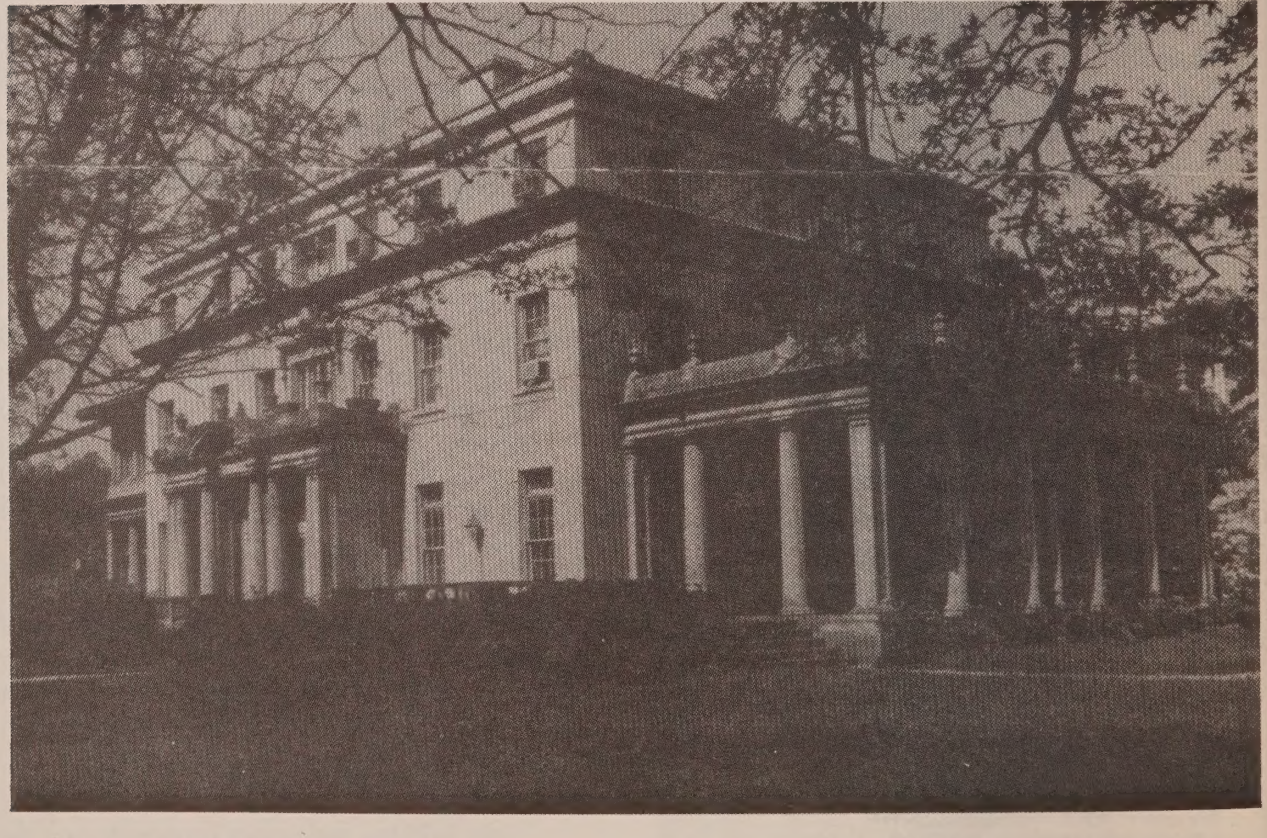
Lloyd E. McIntyre II
President – W. Va. Chapter
Executive Vice President – National

Important Date to Remember
August 3, 1985

West Virginia Chapter Econo-Meet

Some may ask why another meet so close to others that are upcoming or that have just occurred. Answer would be in one word, "LOCATION." True, there are several meets around the country, but the cost of attending these meets goes up every year. It is our desire to create for the membership a desirable Econo-Meet of a single day's duration that is affordable.

There are approximately 150 members within a 250 mile radius of Charleston. This means leaving on Friday evening after work, spending all day Saturday and returning home



The Mayo Manor – northeast corner

late Saturday night or Sunday morning. For those of you in the southern region of the country who plan to attend Radiofest in Chicago the next weekend, you will now have a stop over and more justification for your trip.

The location of the Red Roof Inn is covered in the NEWS FROM CHARLESTON. It is a first class inn, has an 8′ security fence, location is directly off the interstate, beside plenty of reasonable price restaurants. It if rains, the flea market moves 100′ and we are under the interstate with room for over 100 vehicles! You will never see a more ideal location, both from a cost or accessiblity standpoint. Please note registration is FREE, if you pre-register.

If this event is successful, we will make it an annual affair.

West Virginia Chapter Econo-Meet, That Says It All.

Tom Resler
West Virginia Chapter-Treasurer

P. S. Our thanks to Jane and Bill Denk for their efforts.

Thomas A. Edison's Appraisal of Radio in 1926

In the October, 1926 issue of *Radio World*, Edison made the following statement: "People interested in radio say that radio reproduction is good. Music on the radio is very poor because it is badly distorted. I quite approve of radios and think there should be one in every home, but at the same time, the set should not be used for musical purposes. It is good for news and for reports of ball games, boxing matches, and speeches, where distortion is not noticeable."

"There is no money for a dealer in it. We have made a survey of Edison dealers who have sold radios and find that they are rapidly giving them up. The mechanism is too complicated for the average man to fix, once it gets out of order, and the dealer is called in again and again, with the result that he loses both time and money."

The chief difference between radio and the phonograph is in distortion. The average American family has an inborn love of good music and as the radio fad passes, the people will once more turn to the phonograph."

"The radio is a big and new thing, but after the novelty has worn off, the phonograph will reclaim its own."'

Edison's statement provoked considerable dissent among radio engineers and others in the radio business.

Frank Reichmann, acoustical engineer with long experience in both radio and phonograph reproduction said: "I cannot believe that a man of Mr. Edison's intelligence and experience could be so badly misinformed as to condemn a tremendously growing and healthy American industry in this wholesale manner. Actually the best modern radio devices give distinctly better music than the finer phonograph. Radio dealers have made money and they are making money now, certainly more than the phonograph dealers, and they are going to continue to make money on radio."

Hugo Gernsback, Editor of *Radio News,* said that a phonograph record, after being played a couple of hundred times, was incapable of rendering good music, even on the best phonograph ever made. He said the best radio sets distort less than the best phonographs.

Herman Bernard, Managing Editor of *Radio World,* said that "Mr. Edison is one of the greatest inventors the world ever produced, and, therefore, any comparison he makes between radio and the phonograph is very interesting. It must be remembered that Mr. Edison is a venerable man, hence we should listen to him with veneration, and respect him even if some of his remarks are contradicted by metered test. The new phonographs distort less than the old radios,

but the new radios distort less than the new phonographs. It is not clear which pair Mr. Edison compared."

"This is radios greatest year, Thomas A. Edison to the contrary notwithstanding," said G. Clayton Irwin, Jr., General Manager of the Chicago Radio Show. "In New York more than 10,000 dealers visited the Radio World's Fair. They were all enthusiastic. If the public were not delighted with radio and the programs that are now being transmitted daily, this would not be true."

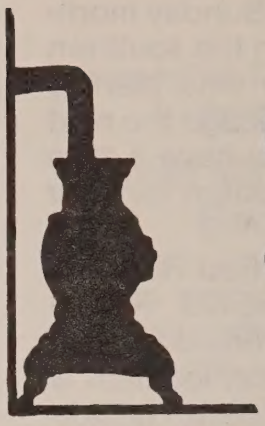
Apparently hardly anyone in the radio business agreed with Mr. Edison. He must have changed his mind later and probably regretted the above statement. According to Morgan E. McMahon's *Radio Collectors' Guide,* Edison manufactured radios in 1928, 1929, and 1930. It causes one to wonder if Edison's statement in 1926, referring to radio as a fad and novelty, soon to wear off, and the phonograph coming back to the top as the favorite source of music, presented any problems for his sales people when he started making radios just two years later.

Edison may have been interested in protecting his phonograph business and made the statement as more of a business and sales response to the inroads radio was making, rather than making a studied engineering assessment.

J. A. Moore

Rhode Island Summer Meet

The New England Wireless and Steam Museum, Frenchtown Road, East Greenwich, Rhode Island 02818, plans a gala event. Live steam engines, antique motor cars, radio swap sessions. There will be refreshments. July 27, 1985. Contact Bob Merriam (401) 884-1710 for details if necessary.



MEL'S CORNER

With the continual growth of ARCA, few realize the amount of correspondence and the number of inquiries that come in to our able secretaries, Bill and Jane Denk.

These inquiries have to be answered promptly and properly which sometimes requires referrals to the specialists in the category of information requested.

Our secretaries provide a general information center!

They have on hand volumes of material for identification purposes, and take considerable time to find answers. At times the technical involvement requires referrals to specialists, who take the time and effort to provide the information.

We of ARCA are grateful to all those dedicated souls who generously try to help!

The newspapers and general public find our listings in libraries and this source of correspondence is ever increasing. Antique radios are becoming more and more interesting subjects of conversation these days. Collectors are beginning to realize their value with more people now beginning to look around their attics and antique shops-along with the flea markets.

It is interesting to see the items they buy, but more interesting to see the items they keep and hold on to! Age seems to be the determining factor. At what period in their lives does this item ring a bell? The crystal set? The horn speaker and earphones? The three dialer-with Amos & Andy? Their first TV?

We all have our preferences and differences in the items we collect and there are many categories of collections.

We like the items we know most about and discuss the merits of beauty, construction and past performance. We recall the inventors who made possible these items of enjoyment and communication. We recall those early manufacturers and the custom radio shops, who tried this and that to improve the quality of reception.

Early radio magazines have many fascinating stories in them, aside from the advertisements—wiring hook-ups and construction articles. A limited amount of this early reading material shows up at various meets but when it does, it is snapped up quickly. We have reports from collectors who go to their local libraries and are amazed at the magazines that have survived. It's worth a try. Old book stores are another source.

The ARCA West Virginia Chapter book store has a number of publications available. See the notice in our current ad section. They are adding various radio publications all the time and it is growing.

The big event of the year is fast approaching for antique radio collectors when the Antique Wireless Association – AWA – again holds its annual conference at Canandaigua, New York, September 25th through the 29th, with scores of ARCA members attending.

See you there ! ! !

CHEERIO! ! !

Mel Comer
205 Roberts Road
Ardmore, PA 19003

Collectors! Don't forget to touch base with Mel.

Book Review

The Fabulous Radio NBD at Otter Cliffs by Brandon Wentworth

Brandon Wentworth has written a small but interesting book on this famous WW I station, NBD, located near Bar Harbor, Maine. The book covers the history of the station, and its "owner," Lt. Alessandro Fabbri, from its origin as a private amateur station, to its take-over by the government in WW 1, and its growth to become ". . . the most important and the most efficient station in the world," according to the Secretary of the Navy. The station was finally shut down and razed in 1935. The only evidence that remains on the site of the station is a memorial monument and plaque located within what is now Acadia National Park.

Fabbri was a socialite and yachtsman who summered at Bar Harbor. Around 1912, he constructed a very elaborate amateur wireless station at his summer home. He then became the tenth licensed amateur operator in the U.S., with the call 1AJ. When the U.S. declared war on Germany on April 6th, 1917, Fabbri offered to donate his amateur station to the Navy. After making the offer, he upgraded the station at his own expense "to the most advanced state of the art," spending over $25,000 at the Wireless Specialty Apparatus Co. In order to get the Navy to accept his station, he offered to manage the station as a civilian, and later offered to join the Navy. For reasons that are not clear, the Navy continuously refused his offers. Finally Fabbri contacted a neighbor, Franklin Delano Roosevelt, who was the Assistant Secretary of the Navy. Mr. Roosevelt took action to obtain a commission as ensign for Mr. Fabbri. With J. A. Proctor, the chief engineer for the Wireless Specialty Apparatus Company, Fabbri further increased the size of the station, and they selected a site for the station at Otter

Cliffs, which Fabbri leased for the government at his expense. The Bar Harbor Country Club on the grounds became the site for the receiving station. Station AA2 (later K2B and then NBD) finally went into service on August 28, 1917. NBD was primarily a receiving station, although it did have a 5 KW spark transmitter located at Seawall, six miles from Otter Cliffs. Most traffic directed to NBD was coded, and had to be copied perfectly because there was no way for the operators to break in to ask for repeats. Traffic was retransmitted to Washington, D.C. by land line Morse. Return traffic to Europe was transmitted by the high power long wave Navy radio stations NAA (Arlington) and NFF (New Brunswick, NJ). Radio YN in France was the message traffic center for the American Expeditionary Forces (AEF) in France.

NBD had the very first high speed radio recording machine. It was designed to receive signals up to 1000 words per minute, to intercept expected high speed German submarine traffic. However, no such traffic was ever received. By 1918, NBD was handling over 20,000 words a day from Radio YN. On October 6, 1918, NBD copied the first German surrender message transmitted by Radio POZ in Germany. Following the war, traffic increased to 28,000 words per day and NBD grew as the navy's principal receiving station for transatlantic messages.

For his services to the navy, Lt. Fabbri was awarded the Navy Cross by President Woodrow Wilson. In 1922, at the age of 44,Fabbri died unexpectedly from pneumonia, and in 1935 NBD was dismantled. Thus ended the story of the "most efficient station in the world," and the life of a dedicated citizen, who served his country well.

Wentworth's book expands greatly on this story, includes many pictures of early wireless equipment, and many stories about the "firsts" at NBD. I recommend it highly for our radio historians. Copies can be obtained from the author, Brandon Wentworth, Box 862, Southwest Harbor, Maine, 04679. The cost is $4.50 post paid.

Jim Troe

John F. Rider Dies

John F. Rider, died February 6, 1985, at the age of 85.

Rider was a radio pioneer, author, philatelist and publisher. He began as a radio feature writer for several New York papers in the 1920's, and in 1930 became a Service Editor of Hugo Gernsback's *Radio-Craft* magazine. After leaving Gernsback, he published the famous Rider Manuals – anthologies of receiver schematics that became the bibles of the service technician for many years. He also wrote and published numerous books on radio service subjects.

He developed a vacuum-tube voltmeter, the Rider Voltohmyst, and an intermittent indicator, the Chanalyst, which were standard equipment in many service shops.

In WW II, John Rider served as Director of the Signal Corps Publication Agency, responsible for preparing and publishing the myriads of instruction and service manuals covering all Signal Corps equipment. He retired as a Lt. Colonel after the war, and resumed operations at John F. Rider, Publisher. In 1962 he sold the business to Hayden Book Co. and retired.

He was extremely active in Amateur Radio with his station W2RID.

Rider was a fellow of the Radio Club of America. He received their Ralph Batcher Award in 1977.

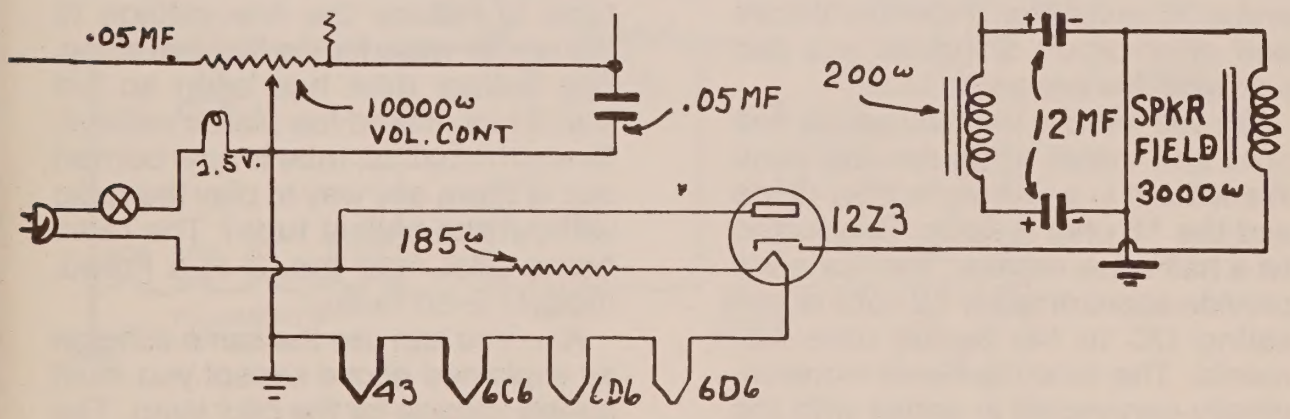
Old-timer's Notebook

James A. Fred ©1985 J.Fred

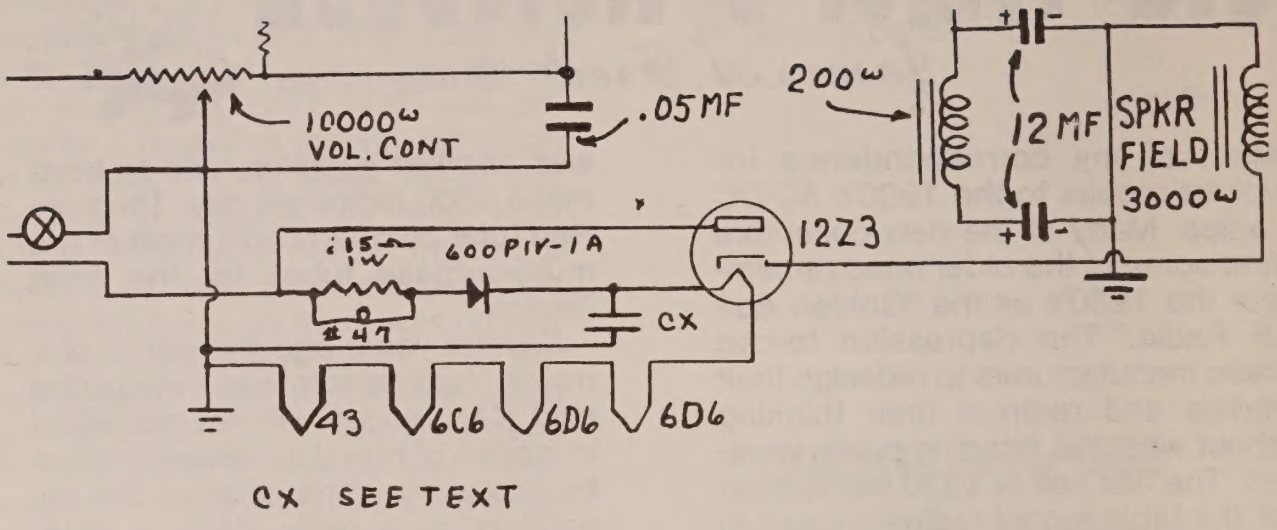
Most of my correspondence involves repairs to the 1930's AC-DC radios. Many of the new collectors and some of the older ones remember the 1930's as the "Golden Age of Radio." The depression forced radio manufacturers to redesign their radios and redirect their thinking about what the listening public wanted. The first half of 1930 found most of the table model radios housed in nice wooden cabinets. The last half saw steel cabinets and then plastic cabinets take over the small radio field. The Noblitt-Sparks Corp., which made Arvin radios, led off with 2, 3, 4, and 5 tube radios with steel cabinets. The tubes were usually multi-element tubes with the equivalent of 2 or 3 separate tubes in each glass envelope. It was reported that Arvin manufactured 5000 small radios per day for Sears Roebuck. Emerson was another supplier, said to have made 5000 radios per day. The Ken-Rad tube company built most of the multi-purpose tubes for the Arvin Radios.

Several years ago the editor of a major radio-electronics magazine said, "Our readers are not interested in stories of how you repaired radios by replacing some or all of the capacitors in a radio. Write a story about how to improve, repair, or upgrade the performance of a radio without changing the cabinet or outward appearance of the radio." With this thought in mind I've chosen questions along these lines.

Q. I have a small 5 tube radio that I like very much, but it has a line cord resistor that is in such bad shape that I am afraid to plug it into an electrical outlet. How can I replace the line cord with a regular



THE ORIGINAL CIRCUIT DIAGRAM



MODIFIED TO REPLACE THE 185Ω LINE CORD RESISTOR

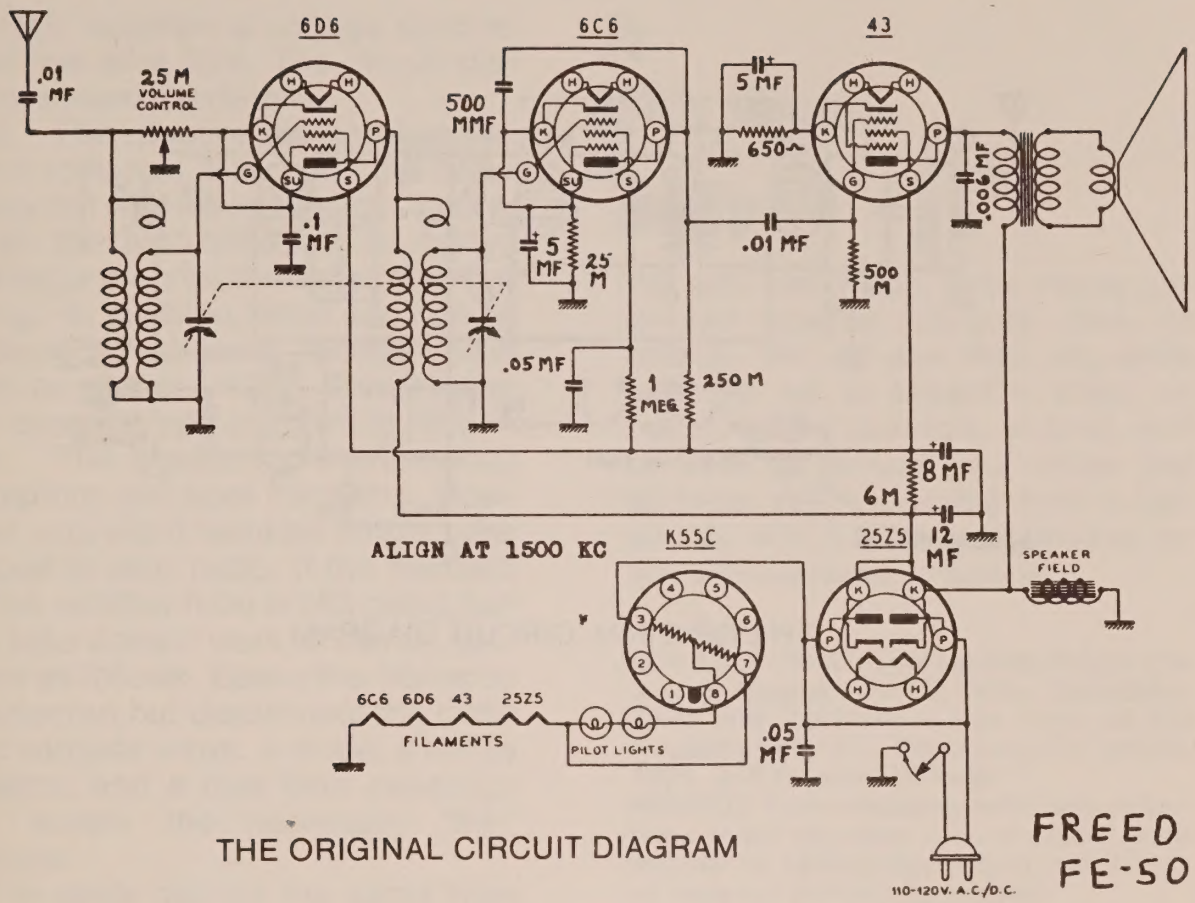
line cord and still play the radio? It is a General Television & Radio Corp. model 745.

A. Through the magic of Solid State electronics, it is easy to modify the circuit of the radio with the only visible change being in the line cord. To do this you will need a rectifier diode, rated at 400 v PIV, and 1 ampere, a newline cord, a 15 ohm, 1 watt resister, an assortment of electrolytic capacitors, rated at 150 VDC, and a DC voltmeter. From the before and after circuit diagrams you can see what we are going to do.

We will remove the old resistor line cord and install a regular line cord. We will put in a Silicon rectifier diode and the 15 ohm resistor. Connected as a half-wave rectifier, the diode will provide approximately 52 volts of pulsating DC to the series tube filaments. The tube filaments were originally connected in series with the AC line and the resistor line cord. The tube filaments will perform their intended function whether they operate on AC or DC as long as the voltage is adequate. This particular radio has 3 tubes with 6.3 volt filaments, one with a 25 volt, and one with a 12 volt filament. Adding the tube filament voltages together amounts to 56 volts. Since the diode only supplied 52 volts and we need 56 volts, we can add a small capacitor designated "CX" which will increase the voltage applied to the filament string. Use a DC voltmeter and monitor one of the tube filaments while you try various 150 VDC rated electrolytics. The filament voltage should be within 10% of its ratings.

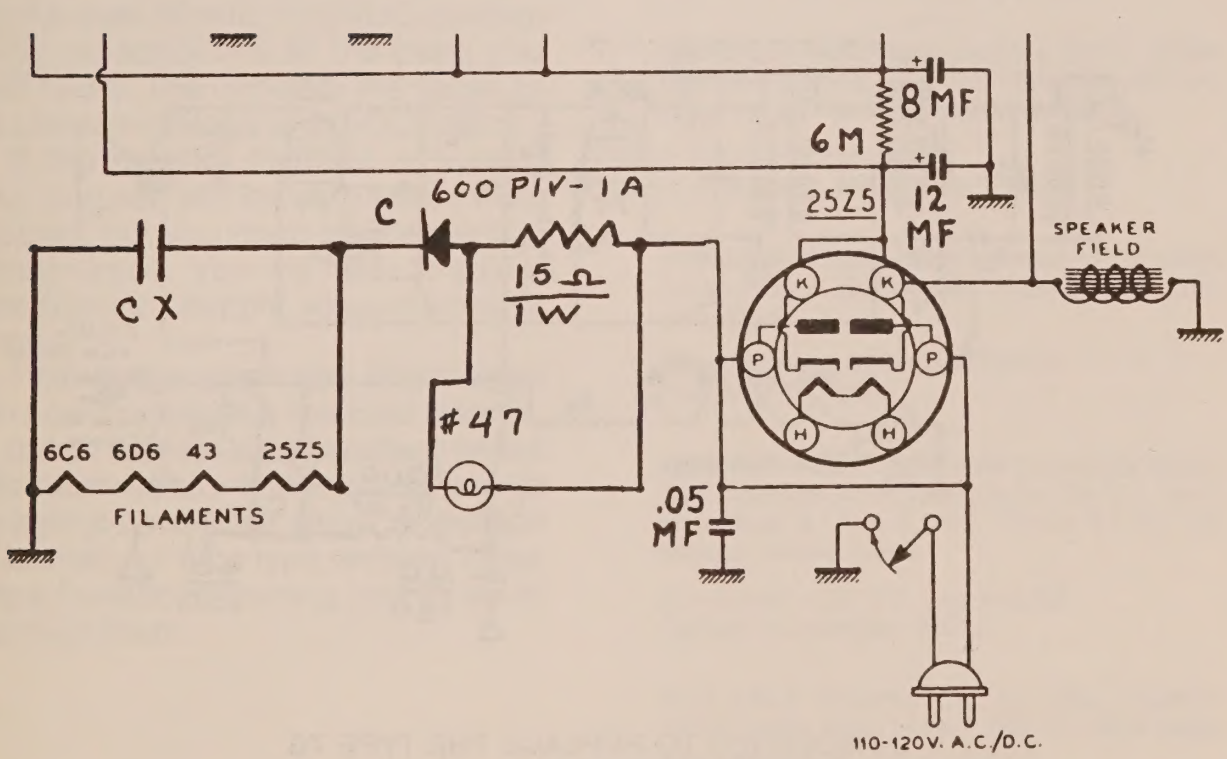
Q. My radio has a metal ballast tube to reduce the line voltage to the proper value for the filament string. The ballast tube has been so hot that it has melted the plastic cabinet. Since the ballast tube is now burned out, is there any way to play the radio without the ballast tube? The radio has a pilot light too. It is a Freed, model FE-50 radio.

A. You can use the same scheme as explained above except you must supply voltage for the pilot lamp. The beautiful part about this solution is that you can put the diode, resistor, capacitor, etc., inside the empty ballast tube. This way the chassis will look as it did originally. The ballast tube cover will be rusted, so you can clean it up and give it a spray coat of satin black paint. The 15 ohm, 1 watt



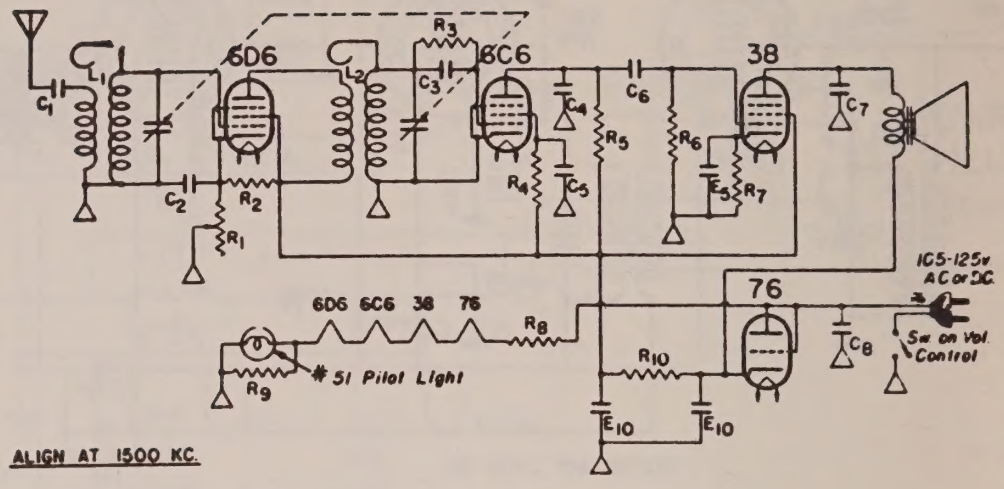
THE ORIGINAL CIRCUIT DIAGRAM

FREED
FE-50

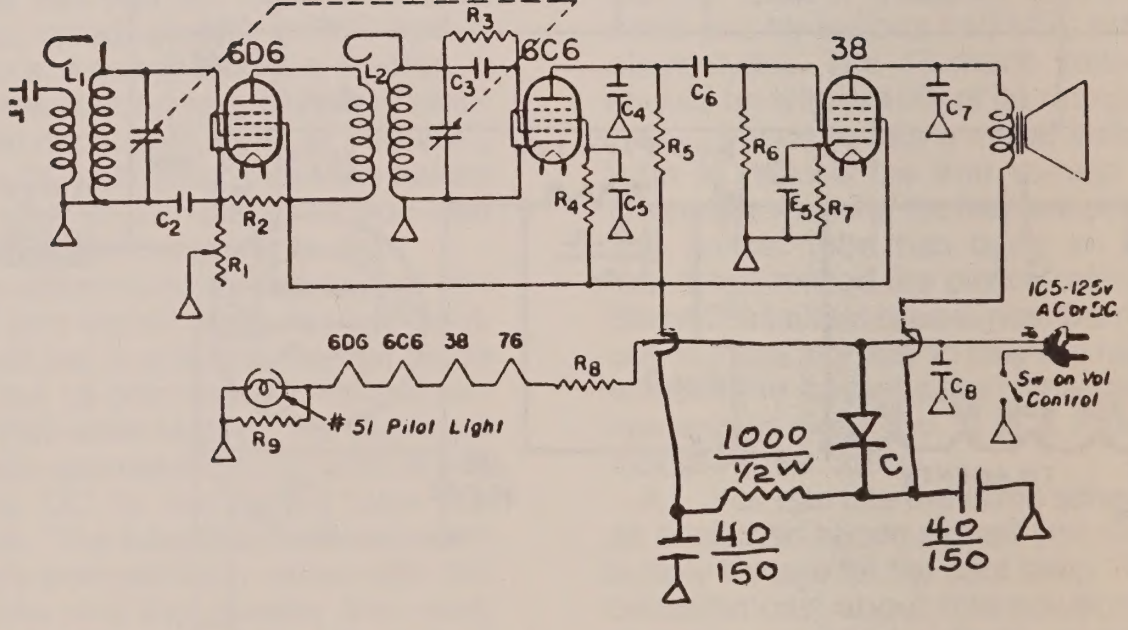


MODIFIED TO REPLACE THE BALLAST TUBE

J. Fred 5-15-65



THE ORIGINAL CIRCUIT DIAGRAM



MODIFIED TO REPLACE THE TYPE 76
1/2 WAVE RECTIFIER

resistor supplies a voltage drop to light the pilot light. The circuit diagram shows the details.

Q. This question also involves filament voltages. How can I get rid of a very hot wire wound resistor mounted on the radio chassis? It supplies a voltage drop for the series filament string. In addition, what can I do to replace a half-wave rectifier tube such as a 1V or a 12Z3. These tubes are obsolete and are hard to find.

A. The answers to the previous questions will work here, too. However, you won't want an empty tube socket in your radio. If the filament of the rectifier tube is still good, but the tube doesn't work efficiently, proceed as follows. Leave the filaments connected but disconnect the plate and cathode wires. A diode, a series resistor, and a dual filter capacitor will supply the necessary "B+" voltage.

The diode can be the same type as is used to supply the filament voltage, a 1000 ohm, 1/2 watt resistor, and a dual 50 mfd, 150 VDC electrolytic capacitor are all the parts you will need. The circuit is the same as is used in millions of AC-DC radios.

If the rectifier filament is burned out, you can still leave the tube in its socket, but you must rewire the filament circuit. You will have to adjust the filament supply voltage accordingly.

I have now given you information on how to replace a line cord resistor, a ballast resistor, a high wattage series filament resistor and told you how to substitute a rectifier circuit to replace a burned out tube type rectifier. Keep your questions coming and I'll try to answer them.

James A. Fred, Rt. 1, Box 41
Cutler, IND. 46920

Ye Old Swap Shop

All ads and Swap Shop items are printed in the Gazette free of charge. We do ask that you write your ad on a separate sheet of paper, type if possible, or print, and be sure to include your name and address. We reserve the right to edit all ads. ARCA is not responsible for any transactions, of course.

FOR SALE: Hard cover reprints of *High Frequency Apparatus* by T.C. Curtis, 2nd edition, 1920. Also, *Electricity at High Pressures and Frequencies* by H.L. Transtrom, 2nd edition, 1921. $15.95 each, postpaid.
WANTED: Early magazines with Tesla coil articles or will buy xerox copy of article. Need material for bibliography project. Information on Tesla coil articles also needed.

Tesla Coil Builders Association,
RD 3 Box 181, Glens Falls, NY 12801

FOR SALE: Restoration supplies: D.O.C., green "silk," tinned bus, loop "litz," "lacquer-stik" and much more. For 1985-I list send SASE.

C. Days, P.O. Box 105G
S. Dartmouth, MA 02748-0205

FOR SALE: Am disposing a number of old radios for an estate. DeForest Interpanel and other early items.

Ray Klusewitz, 825 North 2nd St.
Reading, PA 19601

WANTED: Tubes-201-A-WD-11 and UV-199's. Also miscellaneous cabinets for Clarion, Radiolas, Bush & Lane 6 tube, Kolster 6 tube and Stewart Warner parts.

Joe Barratt,26313 S. Leonard Rd.
Camas, Washington 98607

FOR SALE: Webster Chicago wire recorder with 3 reels. Wire model 288-1A. Nice case. Any reasonable offer accepted.

Gene Reynolds, 53 Marple Rd.
Haverford, PA 19041

FOR SALE: Large collection of 150 old radios. AK, Grebe, Crosley, Federal, RCA and others. Will make a deal on all you can carry out of here. Send SASE for list.

Alvin Heckard, RD1, Box 88
Lewistown, PA 17044

WANTED: Aeriola Sr., working or not, as long as parts all there. Retired. Price must be reasonable.

M. Whittman, 1 Ridgewood Ave.
Lake Hiawatha, NJ 07034

FOR SALE: Antique tubes, parts, books, literature. See our new catalogue of 24 pages on request. Our stock of items now expanding.

Antique Electronics Supply, 1725 W. University
Tempe, Arizona 85281

WANTED: Need badly three knobs for Philco Model 42-390 console. Can you help? It's a very sentimental set! Perhaps knobs similar?

Mrs. Tsantes, 2008 Wood Hollow Cove
Virginia Beach, VA 23454

WANTED: Hallicrafters Skyrider Models S1, S2, S3. Super Skyrider 4, 5, 6 in S or SX. S7 and Sky Buddy. Also S10 Ultra or S11. Skyrider Model 32 and Echophones EC2, 3, 4, 6, plus following Skychief S14, SX16, S18, DD1, S30, S35, SX88, SX100 or 96, HT1, HT4, HT18, HT5. Any booklets on S1 through S6.

Max C. deHenseler, United Nations, Box 20
New York, NY 10017

FOR SALE: All your favorite radio book publications are now available. Various titles. Write for price list and details.

Antique Radio Club of America
West Virginia Chapter, 4204 Thornapple Lane
Charleston, W. VA. 25312

FOR SALE: Old Timers Note! Few early spark transmitters available these days! Here is your chance to acquire a working early components unit all complete at a reasonable price.

F. A. Nichols, 720 E. Eldorado
Appleton, WI 54911, Tel: 414-734-4021

FOR SALE: 45 year collection vacuum tubes; send list of requirements for availability and price quotes.
WANTED: collection of short wave craft magazines, Pilot Super Wasp with set of coils, reasonable.

M. Levy, W5QJT, 4141 Krupp Drive,
El Paso, TX 79902

ANTIQUE RADIO CLASSIFIED. *"The National Publication for Buyers and Sellers of Old Radios and Related Items,"* announces it is entering its second year of publication. Interested persons should contact the publisher, enclose SASE for reply.

Gary B. Schneider, Antique Radio Classified,
9951 Sunrise Blvd., Suite R-9
Cleveland, OH 44133, Tel: 215-582-3094

FOR SALE: *Rider's Perpetual Trouble Shooters Manuals,* Vols. I thru XIV. All individual volumes, no abridgements.

Dale Parsons, 5408 Morrison Drive
Cross Lanes, WV 25313, Tel: 304-776-2180

FOR SALE: Jewell Model 199 Set Analyzer, $35 plus shipping charges. 36 issues of QST between 1922 and 1929, $40 for group plus shipping. Ohmite Dummy Antenna, $15 plus shipping.

F. W. Chapman, 1130 North Lake Parker Ave.
Lakeland, FL 33805

FOR SALE: Send for new revised list for Battery and A.C. Radios and misc. parts. Enclose large SASE with two stamps.

Donald Juleen, 6250 Ledge Rd.
Sturgeon Bay, WI 54235

WANTED: Chassis for Ware 7-tube Neutrodyne, built in 1925, for Music Masters Models 250 and 460 radios. Need chassis, complete with loop antenna, or pix, drawings, data, etc.

Ed Lyon, 11301 Woodland Way
Myersville, MD 21773, Tel: 301-293-1773

WANTED: Cabinet for Tuska 300. Will swap cabinet for single panel Tuska 225 with inside metal label. Also want a Pilot "Universal Super Wasp."

Jim Troe, 111 Skyline Dr.
Morristown, NJ 07960

WANTED: 1941 Zenith Model 7G605 transoceanic portable, short wave receiver. Also back cover (lt. gray) for Regency TR-1 portable transistor radio.

Roger K. Smith, Jr., 143 Oswego Plains Drive,
Oswego, IL 60543, Tel: 312-554-3796 after 6
Tel: 312-554-3796 after 6 pm

WANTED: Pilot parts. No variable condensers.

E.A. Smith, 2714 Alden Road
Baltimore, MD 21234

WANTED: Philco superheterodyne 90B and Sears Silvertone, very good to excellent condition.

Vincent L. Johnson, 3061 Baldwinbrook Drive
Montgomery, AL 36116

WANTED: KNOBS (3) for Fada Cathedral, Model 43.

Davis Horvath, 531 Nutt Road
Phoenixville, PA 19460, Tel: 215-933-0203

WANTED: Type 4532 Vidion.

Tod Drogoski, 507 Coal Valley
Clairton, PA 15025

WANTED: 4¾" diameter tuning dial plate for Sparton AC-62 with both Kc and meters. Does anyone have a paper or photographic replica?

Ross Smith, 1133 Strong Ave.
Elkhart, IN 46514

WANTED: Plastic cabinet for RCA Model 56 x 5 "Hotel Radio" (Dk. Brn. or Blk.); cabinet for G.E. Model A-63 radio; original speaker for Midwest Model 18-36 radio.

Fred Butterfield, Rt. 3, Box 394
Williamstown, NJ 08094

WANTED: Paragon rheostat-tube socket & plate condenser. Crosley 59 chassis & 299 speaker, any condition; or, will buy set. Need information or picture of Thompson P-11 set. Also looking for cabinet for P-11. Need rheostat knobs & large audio transformers for Grebe Synchrophase.

Ray Schober, 6938 Western Ave.
Omaha,NB 68132, Tel: 402-554-0366

WANTED: Pretty colored plastic radios, unusual radios, and almost any kind of microphones. Will trade battery sets or money for such items.

FOR SALE: Radiola 30, very good condition, working. Will bring to AWA meet.

WAVES, 32 East 13th Street
New York, NY 10003, Tel: 212-989-9284
(Tuesday - Friday, Noon to 6:00 pm)

WANTED: Amplion Ar111-Ar114 and AR 19 drivers. Also Amplion Concert Dragon Model AR23 or AR 27.

Eddy Clement, 6585 Viau
Montreal, P.O. Can. H1T-2Y8
Tel: 514-376-9026

WANTED: Tubes, audion, radios/wireless sets & literature pre-1925. Also good, original transformers for Grebe CR-9 and Freed-Eismann NR-6, rheostats for AK 20, 33; Crosley Type "D" rheostats. Please quote condition & price.

FOR SALE OR TRADE: Edison "78" records.

Marc Gottlieb, Box 4291 Stanford,
Palo Alto, CA 94305

WANTED: Old mono and stereo tube hi-fi equipment. Working or not, complete or parts. All makes and models.

Jack Smith, 59 Millpond
North Andover, MA 01845

TRADE: Hallicrafters Sky Buddy, early model for other Hallicrafters or National gear. Will pay difference in value.

Ross Smith, 1133 Strong Ave.
Elkhart, IN 46514

LOST & FOUND: A photo flash attachment was found following Ralph Williams' Dedication. Owner please contact –

Bill Hurni, 329 Evergreen Drive
North Wales, PA 19454, Tel: 215-699-5787

WANTED: E.H. Scott collector/historian would like any Scott literature, exotic cabinet model Scotts, and early non-chrome Scotts. Have items to trade.

Jim Clark, 1006 Pendleton Drive
Lansing, MI 48917, Tel: 517-323-9595

WANTED: Radios, transmitters, tubes, etc. Pre-1925. Must be excellent to mint. Top prices offered.

Ralph Ernstein, 18934 Celtic Street
Northridge, CA 91326, Tel: 818-363-3078

FOR SALE: Batch of honeycomb coils & early swivel mounts, $25.00; G.R. 1 kc osc., vintage 1921, $45.00; Lord Calvert 4 tube radio in bottle, novelty, $95.00. Several horn speakers. Send SASE.

Floyd Paul, 1545 Raymond
Glendale CA 91201, Tel: 818-242-8961

TRADE/FOR SALE: List 85-2 is ready. Large SASE for list. 1919 W.E. SE-1000B amp.; BC-14A parts-chassis, cabinet; Carbon ring/spring mike, Zenith lighted sign; crystal set parts, telephone parts, Federal rheostats/transformers; duo-lateral plug-in coils & holder; DeForest plug-in coils, etc.

George Potter, 238 Village Drive
Lewisville, TX 75067, Tel: 214-436-3944
(after 7, CST)

WANTED: RCA Radiola 51. Prewar TV sets, tube type or mechanical. Cash or good trades available.

Jack Davis, 63 Midchester Avenue
White Plains, NY 10606, Tel: 914-683-9478

WANTED: National SW2 and SW4 to round out my National collection.

Jim Troe, 111 Skyline Drive,
Morristown, NJ 07960

WANTED: De Forest Everyman Crystal Set and/or RCA Aeriola Jr. Crystal Set.
WILL TRADE: Hammarlund HQ-170X Amateur Receiver in good working order.

Aaron D. Solomon VE10C, 8 Crichton Park,
Dartmouth, Nova Scotia, Canada B3A 2N8

WANTED: Freed Eisemann advertising material. Almost anything Freed Eisemann. Cabinet for Radiola III. Radiola IIIA in good to mint condition. Operating booklet for Radiola III-IIIA. Balanced amp.

T.S. Estes, 555 W. Gulf Bank #94,
Houston, TX 77088

WANTED: Ferrand magnetic speaker, Browning Drake receiver, Peerless Dynamic 9" speaker. Radio News: Oct. 1921, Jan. 1922 Short Wave Craft: 1931.

Ron McNeill, Box 472,
Yorkton, Sask., Canada, S3N 2W4

WANTED: 19" rack-mounted speaker panel for National AGS or HRO. Cash or trade.

Don Johnston KA9KXQ, RR1 Box 218-A,
Windfall, IN 46076 TEL. 317-945-7735

WHERE'S THE BEEF? Over 300 old tubes (1915-1930) collection to go. Large SASE for list & Details of Sale.

J. Wasiewicz, 229 Sarles Ln.,
Pleasantville, NY 10570

WANTED: Tuska radios, parts and related items. 3 tuning condensors for Lafayette Neutrodyne.

Thomas J. Maciolek, 41 Green Point Cir.,
Chicopee, MA 01020

SCOTT: Scott Radio Collector wants to purchase Scott Philharmonic, any version. Also, would anyone with a Scott Napier Consolett please contact me, I have a question concerning it.

Denis Yanko, 410 N. Summit,
Oconomowoc, WI 53066 Call collect after 5:00 CST 414-965-3641

FOR SALE: Battery eliminators 1.4 V to 6V, adjustable and regulated. Up to 1.25 amps. 3 plate voltages and C bias voltage too. With or without a case. SASE for info.
NOW AVAILABLE: An instruction sheet for your Aeriola Sr. $3.75; tuning dials for Philco; models 33 B, 84B, 93B or 37-84. $7.50 each. White filler for engraved panels and knobs $3.25. Prices are postpaid. Write:

Peter Yanczer, 835 Bricken Pl.,
St. Louis, MO 63122

WANTED: Operating and service manual for Dumont oscillograph type 304-A and schematic for Bosch Conqueror radio model 504. *First* member in Hawaii.

I. Yano, 80 Lehua St., Kahului, HI 96732

FOR SALE: Fada 160, Radiola 16, Philco, Audiola and other cathedrals. RCA, Philco, Tatro, DeWald, Fairbanks-Morse, Delco tombstones. Early plastics, unusual farm sets, art-deco consoles, Zenith "Major," lots more. Send SASE for listings.

E. Ripley, 2276 E. Holloway,
Maplewood, MN 55109. TEL: (612) 777-6791.

WANTED: Two audio transformers for Arborphone Model 27. Two drivers with 3/4" nipples for twin speakers on Grebe Syn. console.

Everett Ludley, 301 Edgewood Drive,
Webster City, IA 50595 Tel: 515-832-3763

JOIN the VINTAGE RADIO & PHONOGRAPH SOCIETY. Bi-monthly issues of the *Reproducer,* annual VRPS/AWA convention, auctions, contests, free member ads. $13.50/Yr. First Class. Write to:

VRPS, P. O. Box 165345,
Irving, TX 75016

WANTED: RCA Model 813-K console 1937-1938.

James O. Coleman, P.O. Box 2758,
Redwood City, CA 94064

WANTED: Audio transformers for Fada and Westinghouse RADA-also condensers used in these sets.

Harry Faulkner Jr., 5450 25th Place S.W., Naples, FL 33999

SALE: Unusual early construction neutro wound receiver-an eye opener in any collection! Set is in fine condition. Ready for display. Make reasonable offer for this one. Several other rare sets also available.

Charles Barone, 5628 N. Prospect Ave., Norwood Park Twnp., IL 60631

SALE: Now have list of some 230 items-Sets-Parts-Components-too numerous to list here. Send SASE for full details while this stock lasts. Am open for trades.

R. Chester Wisner, 1014 Main Street, Dalton, MA 01226

WANTED: Miscellaneous radio parts needed for restoration purposes. Various hardware items of the 1920's period. Switches-taps-SW-plug in coils and forms-Audio transformers--binding posts-and the like. What's in your scrap box? Dig it out and give me a quote on what you can offer!

Bob Herbig, 4178 Chasin Street, Oceanside, CA 92054

WANTED: RCA 44B Mike in black and chrome. Looks diamond shaped from side. Will pay very well. Also other RCA and Western Electric Mics and parts of.

Stan Novak, 875 117th Ter. N., St. Petersburg, FL 33702 TEL. 813-576-7708

FOR SALE: Copies of our most recent and copious Gazettes for our newer members, six (6) for five (5) dollars.

Jane Denk, 81 Steeplechase Rd. Devon, Pennsylvania 19333

WANTED: I am making up a number of SW-3 coil forms for collectors. Would appreciate number of turns and wire size of these coils to enable collectors to wind their own. Will somebody please help who has original coils on hand? Send SASE for latest list of the many replica parts and components that I am now reproducing. Tell me what you need-standard items or specialties to order.

Keith Parry, 17557 Horace Street Granada Hills, CA 91344 TEL. 213-363-1914

NOTICE: My specialty is repair of old time speakers that can usually be restored to operation. If you're having speaker problems drop me a line with SASE and I will try to help. New cone field coils – whatever the problem. Am in need of four McCullough or Kellogg 401 tubes. Will purchase or trade like number Sparton 200-J tubes. Need base for Magnavox 14" horn.

Dixie Speaker Repair Service, 545 Shades Crest Radio Birmingham, AL 35226 TEL. 205-823-0575

WANTED: Early AC sets using Kellogg 401 tubes, battery box for Radiola Z6, most anything of early de Forest items suitable for display purposes. Have some duplicate trade items available.

Mel Rosenthal, 507 S. Maryland Ave, Wilmington, DE 19804

WANTED: Some eighty different crystal sets now in my collection. Am always interested in unusual types to buy or swap for a few duplicates on hand. Rare tubes are my specialty. Try me! ! Lists are available with SASE.

Mike Feher-N4FS, 9100 Traveller St., Manasas, VA 22110

FOR SALE OR TRADE: McMichael Duplex Super Fiver–British battery set in exc. to mint condition, complete with British valves, sits on swivel base, $150. Music Master wood cabinet horn, mint. Rectangular cabinet horn speaker $65. (unusual). Majestic 52 Cathedral, excellent & works $125. Gloritone Cathedral, good condition $75. Music Master type horn $50. Freed Eisemann FE-15, exc. $65. Freed Eisemann NR-5, mint $95. RCA T6 Tombstone, good, works $45. GE MSI semi cathedral, good, works $60. Zenith 5S237, end table radio, good (needs refinished) $65. Many more. Send SASE for complete list:

Gary Hill, 1507 Ridge Ave., New Castle, PA 16101 TEL. 412-654-9335.

FOR SALE: Regular & brass base WD-11's, transistorized to run the Aeriolas & Radiolas on one battery. Also have regular 01A's, 99's.

Bud Bedker, 66 Cloverside Court, West Seneca, NY 14224

WANTED: Lyric radios made by All-American Mohawk Corp. in N. Tonawanda, NY. Wurlitzer Radios, Wurlitzer and Lyric Radio literature and other information.

Larry Babcock, 8095 Centre Ln.,
E. Amherst, NY 14051

FOR SALE: 30's, 40's & 50's vintage tubes, receiving, transmitting and special purpose. Send 75¢ for my list. Also have military communications equipment for sale; Collins, Stoddardt, Rhode & Schwartz.
WANTED: Good 201A's.

Vic Chartrend, 727 Fraser Avenue,
Ottawa, Ontario, Canada KZAZS1

NEW PUBLICATION: Antique Radio Collector-Add-A-Page catalog. A 30 word classified ad FREE in each issue. Send $5.00 for 6 issues to be published in 1985.

James Fred, R1, Box 41, Cutler, IN 46920

WANTED: Spherical tubular audion, #5514 trans. tube (or sub); top for Radiola 106 speaker, knobs for Crosley Pup & 67, also Radiola 44. Early light bulbs. Will buy or trade for tubes.

Bruce Harbeck, 13408 Westwood Lane,
Omaha, Nebraska 68144

WANTED: Hardware to mount Scott Model 800-B in the large Chippendale cabinet. Need hinges and associated hardware to mount receiver unit, turntable and both doors; console cabinet for 1936 Grunow "teledial" 12-tube radio (see page 97 of "Flick the Switch"); Rider's Service manuals, volumes 19 and up; Zenith wooden knobs; Zenith and Scott radios from 1930's and 1940's; Zenith and Scott literature and advertising; and .01 and .047 or .05 sprague orange drop caps (400-600 volt) in quantities.
FOR SALE OR TRADE: 1944 U.S. Navy type CAY-46076-A Medium Frequency (360-2,000 kHz in four bands) Receiver and 120 vac power supply. Excellent condition, $50.00 or trade.

Joe Koester, 249 Spring Gap South,
Laurel, MD 20707 TEL. 301-725-4299

FOR SALE: Complete set of Riders TV manuals. Vols. 1-12, $100. plus shipping. Hallicrafter SX 16. SM 732 (Round the World Four) National SW3 with coils, AK Pooley (Radio-Cellarette) (see page 148-*Vintage Radio*), early 1 tube ACE with 2B amp, Scott Worlds Record 8. Write for prices and information.

John Drake, P.O. Box 942, 23 E. Wharf Rd.,
Madison, CT 06443

Our newest members

Rita Balentine, Star Junction, PA
John M. Bauer, Springfield, IL
Daniel J. Fitzpatrick, Philadelphia, PA
Reggie T. Holland, Tompkinsville, KY
Gary M. Gulich, Oakton, VA
Charles T. Mooney, Bowie, MD
Vincent L. Johnson, Jr.,
Montgomery, AL
Vincent Sodaro, Charleston, WV
Bob Wise, Sr., Charleston, WV
Charles Allard, Charleston, WV
Daniel T. Maciolek,
Indian Orchard, MA
Harold H. Gowen, Greenville, NC
Glen Jarrett, Cambridge, MD
Harold E. Hunt, Decatur, IN
Irven H. Ingalls, Littleton, NH
Dr. William MacConnell, Tallman, NY
Jack R. Bowers, Highland, IL
Steve Young, North Little Rock, AR
Hy Ness, Bronx, NY
Eugene V. Barron, San Francisco, CA
Robert Piccirillo, West Caldwell, NJ
Eric Sorenson, Hanahan, SC
Michael Sherman, Dallas, TX
James M. Clark, Lansing, MI
George W. Stringe, Boulder, CO
Paul W. Harris, Nitro, WV
C.A. Slaterbeck, Medford, NJ
Frank Avila, Richmond, CA
Douglas M. Heimstead, Fridley, MN
David M. Friedland, Frazier Park, CA
Edward L. Jarosz, Bloomfield, NJ
Lawrence J. Gutter, Glencoe, IL
William E. Roswell, Jr.,
Cherry Hill, NJ
Robert H. L. Russell, Palmer, MA
Michael Orzel, Quakertown, PA
Milton Levy, El Paso, TX
James E. Arsenault, Montreal, Canada
John M. Papa, Lincroft, NJ
James J. Barratt, Camas, WA
Thomas M. Russo, Fanwood, NJ
Arthur M. Richardson, Monson, MA
Shuji Sato, Shinjuku, Tokyo, Japan
W. E. Britton, St. Helens, OR
W. Robert Smith, Bridgeton, NJ
Stephen R. Chrappa, Boonton, NJ
Richard E. Sage, Aledo, IL
Frank and Mary Rasada, Cerritos, CA
Maurice Weinschenker,
N. Huntingdon, PA

John Griffith, Yorktown Hts., NY
William H. Mills, Jr., St
St. Clair Shores, MI
James R. Rankin, Stow, OH
Keith C. Hill, Somers Point, NJ
REINSTATED:
A. R. Dilley, So. Charleston, WV
Allen W. Tomisman, Latham NY
Dr. Clark W. Peck, N. Olmstead, OH

Restoration Niche

More on plugging holes. (See the previous issue for more information on plugging holes.)

Since the last article, I have plugged a rather large hole in a Grebe RORH panel where a phone jack had been added. A few comments are in order. The hole was irregular with many chips and gouges around the perimeter. The hole was first reamed to achieve perfect roundness. I then counter-sunk the hole with a single fluted 90° counter-sink bit until all chips and gouges were removed. By this time the diameter was 5/8". The plug was made by epoxying an appropriate piece of panel to the flat end of a rod and machining. The plug looked like a slotless, threadless flat-head screw. It was held in place, while the epoxy set, by an aluminum plate mounted between binding posts on the panel. A set screw was placed in the plate at an appropriate position directly over the plug, to apply pressure to the plug. The plug was finally lapped flush with the panel.

Holes in wooden cabinets can be plugged readily. The wood, from which the plugs are to be cut, can be pre-stained and finished to match the cabinet. A piece of an old cabinet can be used for plug stock, or the cabinet, with plugs in place, can be re-stained and refinished. Also the wood grain of the plug can be matched and aligned with the grain of the cabinet.

The hole to be plugged must be very clean, perfectly round and free from little chips and splinters at the border. It may be necessary to re-drill the hole to achieve the foregoing. When re-drilling, special drills must be used to prevent splintering and chipping as the drill bit enters the wood. Appropriate drills are Forstner Bits or twist drills ground with a brad point center and cutting spurs at the border.

The next obstacle is trying to obtain the size of plug cutter that you desire. The smallest that I could find in a hardware store was 3/8". The holes I needed to plug were 5/32" and 7/32".

The next step was to make my own plug cutters. It turns out that it is quite easy to do. With only a few plugs to cut, tool steel is not necessary. Almost any steel lying around will do.

To make the plug cutter, first chuck a piece of steel rod in the lathe and drill a hole along the axis of the rod. The diameter of the hole is the same as the plug to be cut. Next, turn the outside diameter to within about 1/8 to 3/16" of the hole diameter. Two straight flutes in the side of the cutter can be ground in on a bench grinder. The best guide for grinding the cutting edge is to look at a plug cutter at the hardware store. The cutting edge is beveled (as if the cutter were cone-shaped) so that the cutter enters the wood gradually, beginning at the plug diameter. This prevents splintering of the plug.

Larry Wright
312/658-5993
131 Hilltop Drive
Lake in the Woods, IL 60102

RadioFest 1985

August 9 & 10, Clock Tower Inn, Rockford, IL 61125. 800-358-7666. Make reservations direct.

The Dissector Tube
by Kenneth McIntosh

At the age of 15, Philo T. Farnsworth became interested in television and determined to devote his life to it. His idea of converting the picture to electricity was similar to Swinton's who proposed swinging the fine point of an electron ray across a mosaic to increase the illumination from each photo cell in turn. Farnsworth tried to pull the separate currents from each cell toward the other end of the tube while deflecting all of them, so that the entire picture would be swung back and forth across a fine point on the collector. He called his idea the dissector tube.

The dissector tube was a photo mosaic surface composed of minute cells of potassium hydride mounted on the end of a tube 6″ in diameter. Along the tube was a circular anode system constructed with either electrostatic or magnetic focusing so that any electrons emitted from the photosensitive surface would be projected in a straight line down the tube. As the image was focused on the end of the tube, the light influenced each of the tiny photocells and electrons were emitted from each. Due to the anodes they were projected down the tube and there was an invisible electron beam of larger diameter, the cross section of which at any point is an exact replica in electrons of the light falling on the original image.

The two deflection systems were arranged at right angles and scanning voltages applied so that this whole beam was deflected from side to side, and at a slower rate up and down in the same way as the electron beam of the cathode ray tube scans the fluorescent screen. At the end of the tube was a small collector electrode, with one very small pointed conductor. As an electron image was moved bodily past this point, a current passed proportional to the strength at this point. This system was actually a mosaic scanning a point instead of a point scanning a mosaic.

To deposit the potassium on the rear plate of the tube after it was blown was quite a problem. The capsules of potassium were sealed to the lead into the tube and driven in by the application of heat. Then oxygen gas was introduced in a way to insure its combination with the potassium surface to form potassium hydride. Potassium combines with oxygen when exposed to air or water. To get attention and break the monotony of a long period of technical discussion, Farnsworth would ignite pellets of crude potassium by throwing them into water. This was one of his favorite tricks to amuse visitors. Later a mica sheet was used on the end of the tube to hold and insulate the cells which were changed to caesium oxcide.

The two main problems were to obtain the sensitivity necessary to be affected by light from the subject and amplification strong enough to increase the feeble signal that the photo electric substance provided. Late in the summer of 1928 he gave a demonstration of television that was successful at least from the standpoint of impressing his financial backers.

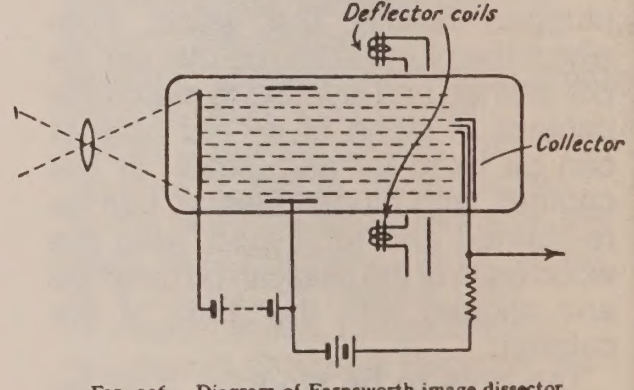


FIG. 116.—Diagram of Farnsworth image dissector.

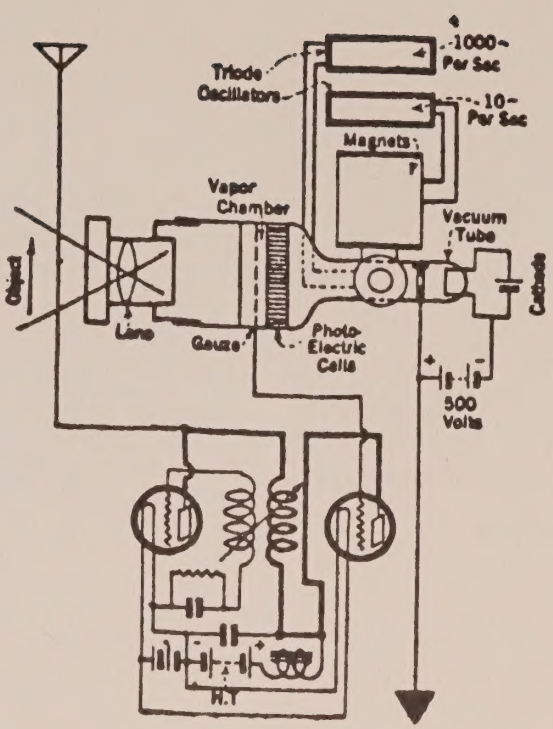
Electronic Scanning by Kenneth McIntosh

Sir Oliver Lodge expressed the opinion in 1928 that leading exponents of television in both England and the United States were equally up against a brick wall and that the limits of the apparatus they were now using would not permit further improvement.

A. Campbell Swinton had realized the same thing 30 years earlier. His difficulty was in designing a system which would effectively accomplish the variations in the transmitting current. The fact that John Baird was going to manufacture a television for the home spurred him into action. He wrote a letter to the London Times describing his latest theory in this manner. "In the transmitter the screen is composed of a large number of minute photoelectric cells each of which is activated more or less by the amount of illumination it receives from the image thrown on the whole screen by the lens. The lens of the transmitting cathode beam explores each of these cells in turn as to whether it finds it illuminated and thus activated or not. An electric impulse of varying intensity proportional to the amount of local illumination, is transmitted to the neighboring mesh wire grid."

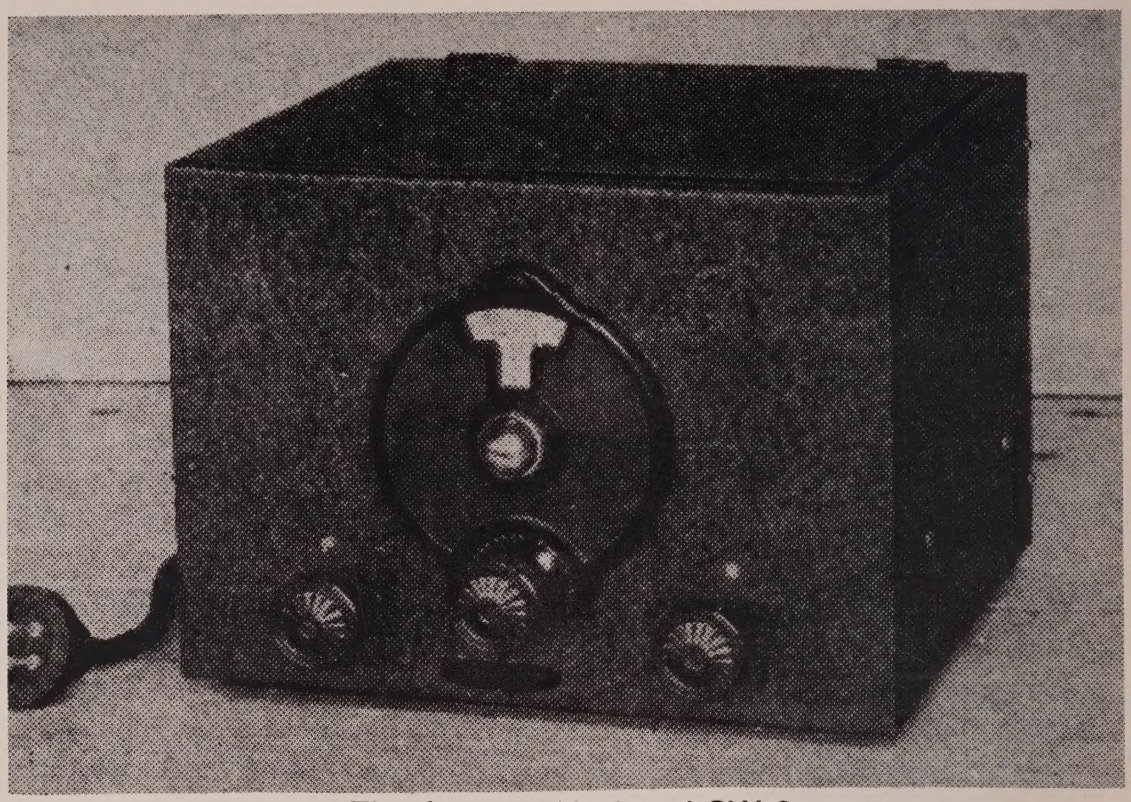
No one knows what Swinton was thinking about in all phases of his system, but it appears to be based on the logic that the constant variations of light from parts of the image to corresponding parts of the mosaic could each, by scanning the mosaic with a kinescope beam of fixed intensity, momentarily be increased to produce more current from each cell with the same variation. These variations could be transmitted one at a time, amplified and a cut off level established that would produce a picture at the receiving end.

Photocells were exceedingly active chemically and readily combined with oxygen so they were enclosed in a

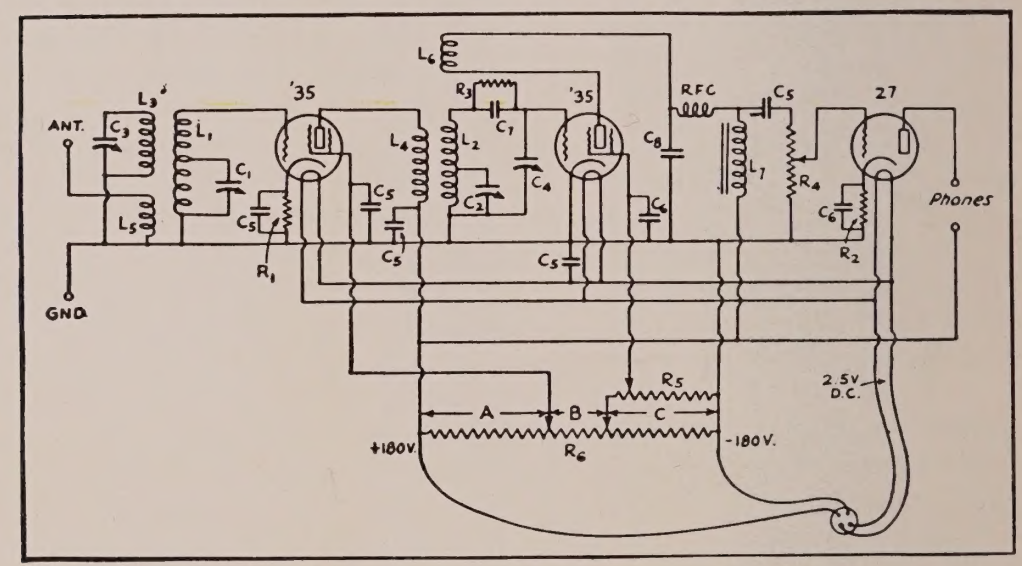


tube containing a inert gas or vacuum. This is evidently what the vapor chamber was for. There were several kinds of photocells but Swinton recommended Rubidium for his system. The first part of the arrangement seemed to work but although cathode ray tubes had become popular for use in the receiving end, no one had worked with them enough to make them practical for scanning the small mosaic.

In the Unites States someone had already been experimenting with the cathode ray for the transmission of images. His name was Philo T. Farnsworth, the same man who had decided to use the sawtooth waveform for deflection. Farnsworth was sort of a loner except where money was concerned. He wanted to find out all the answers himself. He did not like to be inhibited by reading about the experiments of others, but he was aware of them to some degree. He thought that by avoiding imitating others, he would be more likely to stumble onto something new and different, which he eventually did, but it made his path a difficult one. Progress was slow and many years would be needed to perfect the kinescope and make it practical for transmitting electronic images.



The famous National SW 3



THE ALL-A.C. VERSION OF THE RECEIVER

L_1, L_2, L_3, L_4, L_5 and L_6. See table of r.f. transformer specifications.
L_7 — 750-henry plate coupling reactor. A good audio transformer with primary and secondary connected in series might be used.
C_1 and C_2 — 90-μμfd. ganged tuning condensers with insulating shaft coupling.
C_3 — Midget type trimmer condenser.
C_4 — 8-μμfd. detector transformer trimmer condenser (incorporated in coil form), Hammarlund No. 35.
C_5 — .01-μfd. non-inductive mica fixed condensers.
C_6 — .5-μfd. non-inductive paper fixed condensers.
C_7 — 100-μμfd. mica grid condenser, small type. Incorporated in detector r.f. transformer.
C_8 — 250-μμfd. mica by-pass condenser.
R_1 — 500-ohm cathode resistor, 2-watt type.
R_2 — 2000-ohm cathode resistor, 2-watt type.
R_3 — 5-megohm grid leak, one in each detector transformer.
R_4 — 500,000-ohm calibrated tapered type potentiometer. See text.
R_5 — 50,000-ohm regeneration control potentiometer.
R_6 — B-voltage divider, total resistance 12,000 ohms divided as follows: A, 6900 ohms; B, 2000 ohms; C, 3100 ohms.